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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,968	03/16/2004	Philip E. Jones	060950-5001-US	4181
24341	7590	06/15/2006	EXAMINER	
MORGAN, LEWIS & BOCKIUS, LLP. 2 PALO ALTO SQUARE 3000 EL CAMINO REAL PALO ALTO, CA 94306			ELDRED, JOHN W	
			ART UNIT	PAPER NUMBER
			3641	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/802,968	Applicant(s) JONES, PHILIP E.	
	Examiner J. Woodrow Eldred	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11, 12-17, 23, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, the complete words of the term "NACA" should be completely recited within the claim so that it is clear what is being claimed. In claims 12, 13, and 15-17, the claims are unclear because they claim to depend from the "system" of previous claims, but the previous base claims are drawn to an "inerting system". Likewise, claims 23 and 25 claim to depend from the "inerting system", but they actually depend from a "modular system".

3. Claims 1-5, 8-12, 18-21, 24, and 25 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Leigh et al (2004/0025507).

See especially Figures 1 and 3, and paragraphs 19, 22, 23, 24, 29, 30, and 33. It is noted that the terms "module" and "modular", while often referring to separately housed and interchangeable units, does not necessarily required this structural requirement and can refer to an independently operating system that is not separately housed.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 13-17, 26-30, and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh et al (2004/0025507) in view of Manatt (4,508,548).

Leigh et al disclose an aircraft inerting system for an aircraft comprising a source of pressurized air (100) which can be ambient air, cabin air, engine bleed air, or ram air (paragraph 22); this air passes in turn through a heat exchanger (30), compressor (10), heat exchanger (32), filter (14), and a membrane air separator module (16) which produces a pressurized flow of nitrogen-enriched air; a turbine (22) which is powered by the nitrogen-enriched air; and a shaft (26) and electric motor (24) which are driven by the turbine and which, in turn, drive the compressor (10). Cooling air is provided to the heat exchangers by ram air and expanded air (paragraph 33) so that the airflow of the system can be cooled to a desired temperature (paragraph 22). Leigh et al fail to disclose the use of a plurality of modular units to provide the required flow rate of the system. Manatt teaches that it is well known to provide a plurality of flow separation modules to provide the required flow rate in an aircraft inerting system. See especially column 6, lines 15-19. Motivation to combine is Manatt's teaching in column 6, lines 18-19 that the use of plural modules allows nitrogen concentration to be optimized; as well as motivation provided by the clear engineering principle that a greater number of units can produce a greater amount of product. To employ the teachings of Manatt on the system of Leigh et al and have plural modules is considered to have been obvious to one having ordinary skill in the art.

6. Claims 6 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh et al in view of Runnels et al (4,378,920).

Leigh et al disclose an aircraft inerting system for an aircraft comprising a source of pressurized air (100) which can be ambient air, cabin air, engine bleed air, or ram air (paragraph 22); this air passes in turn through a heat exchanger (30), compressor (10), heat exchanger (32), filter (14), and a membrane air separator module (16) which produces a pressurized flow of nitrogen-enriched air; a turbine (22) which is powered by the nitrogen-enriched air; and a shaft (26) and electric motor (24) which are driven by the turbine and which, in turn, drive the compressor (10). Cooling air is provided to the heat

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exchangers by ram air and expanded air (paragraph 33) so that the airflow of the system can be cooled to a desired temperature (paragraph 22). Leigh et al fail to disclose the use of a temperature sensor or temperature modulation valve to control the temperature of the compressed air. Runnels et al teach that it is known in a compressed air temperature control system for inerting system to provide control of the air temperature by means of a valve that is controlled by “a conventional control means which function in response to change in the inlet temperature of the air” (i.e. this inherently means a “temperature sensor”.) See column 5, lines 1-22. Motivation to combine is the improved performance available by enhanced control with an active temperature control system. To employ the teachings of Runnels et al on the system of Leigh et al and have a sensor and valve to control air temperature is considered to have been obvious to one having ordinary skill in the art.

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh et al in view of Manatt as applied to claims 13-17, 27-30 and 33 above, and further in view of Runnels.

Leigh et al fail to disclose the use of a temperature sensor or temperature modulation valve to control the temperature of the compressed air. Runnels et al teach that it is known in a compressed air temperature control system for inerting system to provide control of the air temperature by means of a valve that is controlled by “a conventional control means which function in response to change in the inlet temperature of the air” (i.e. this inherently means a “temperature sensor”.) See column 5, lines 1-22. Motivation to combine is the improved performance available by enhanced control with an active temperature control system. To employ the teachings of Runnels et al and Manatt on the system of Leigh et al and have a sensor and valve to control air temperature is considered to have been obvious to one having ordinary skill in the art.

8. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh et al in view of Koukal et al (4,795,090).

Leigh et al disclose an aircraft inerting system for an aircraft comprising a source of pressurized air (100) which can be ambient air, cabin air, engine bleed air, or ram air (paragraph

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22); this air passes in turn through a heat exchanger (30), compressor (10), heat exchanger (32), filter (14), and a membrane air separator module (16) which produces a pressurized flow of nitrogen-enriched air; a turbine (22) which is powered by the nitrogen-enriched air; and a shaft (26) and electric motor (24) which are driven by the turbine and which, in turn, drive the compressor (10). Cooling air is provided to the heat exchangers by ram air and expanded air (paragraph 33) so that the airflow of the system can be cooled to a desired temperature (paragraph 22). Leigh et al fail to disclose the use of a temperature sensor or jet pump to control the temperature of the compressed air. Koukal et al teach that it is known in a compressed air temperature control system for a vehicle to provide control of the air temperature by means of a jet pump that is controlled by means of a temperature sensor. See the Abstract. Motivation to combine is the improved performance available by enhanced control with an active temperature control system. To employ the teachings of Koukal et al on the system of Leigh et al and have a sensor and jet pump to control air temperature is considered to have been obvious to one having ordinary skill in the art.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh et al in view of Manatt as applied to claims 13-17, 27-30 and 33 above, and further in view of Koukal et al.

Leigh et al fail to disclose the use of a temperature sensor or temperature modulation valve to control the temperature of the compressed air. Koukal et al teach that it is known in a compressed air temperature control system for a vehicle to provide control of the air temperature by means of a jet pump that is controlled by means of a temperature sensor. See the Abstract. Motivation to combine is the improved performance available by enhanced control with an active temperature control system. To employ the teachings of Koukal et al and Manatt on the system of Leigh et al and have a sensor and jet pump to control air temperature is considered to have been obvious to one having ordinary skill in the art.

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

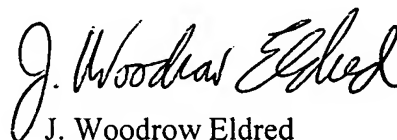
11. Claims 1-37 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 7,048,231. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current application either claims the same invention in slightly different language, or the claims of the patent are more narrow than those of the application, and the differences (such as not having modules) involve obvious elimination of an element and its function.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Woodrow Eldred whose telephone number is 571-272-6901. The examiner can normally be reached on Monday to Thursday, from 8:00 a.m. to 5:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Woodrow Eldred
Primary Examiner
Art Unit 3641

JWE